



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-1159; Project Identifier AD-2022-00692-E]**

**RIN 2120-AA64**

### **Airworthiness Directives; Continental Aerospace Technologies, Inc. Reciprocating Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD) 2022-04-04, which applies to certain Continental Aerospace Technologies, Inc. (Continental) C-125, C145, IO-360, IO-470, IO-550, O-300, O-470, TSIO-360, and TSIO-520 series model reciprocating engines and certain Continental Motors IO-520 series model reciprocating engines with a certain oil filter adapter installed. AD 2022-04-04 requires replacing the oil filter adapter fiber gasket (fiber gasket) with an oil filter adapter copper gasket (copper gasket). Since the FAA issued AD 2022-04-04, the FAA determined that the reciprocating engines identified in the applicability of AD 2022-04-04 are incorrect. This proposed AD would require replacing the fiber gasket with the copper gasket or the stainless steel embedded within polytetrafluoroethylene gasket (stainless steel PTFE gasket). This proposed AD would also revise the applicability to add and remove certain reciprocating engine models, update the required actions to add an additional part-numbered stainless steel PTFE gasket as a replacement part, and revise the special flight permit paragraph to expand the limitations. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) by searching for and locating Docket No. FAA-2022-1159; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

*Material Incorporated by Reference:*

- For Stratus Tool Technologies service information identified in this NPRM, contact Stratus Tool Technologies, LLC, 2208 Air Park Drive, Burlington, NC 27215; phone: (800) 822-3200; website: [tempestplus.com](https://tempestplus.com).

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

**FOR FURTHER INFORMATION CONTACT:** George Hanlin, Aviation Safety Engineer, Atlanta ACO, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5584; email: [9-ASO-ATLACO-ADs@faa.gov](mailto:9-ASO-ATLACO-ADs@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-1159; Project Identifier AD-2022-00692-E” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA

will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed NPRM.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to George Hanlin, Aviation Safety Engineer, Atlanta ACO, FAA, 1701 Columbia Avenue, College Park, GA 30337. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Background**

The FAA issued AD 2022-04-04, Amendment 39-21945 (87 FR 9435, February 22, 2022) (AD 2022-04-04), for certain Continental (Type Certificate previously held by Continental Motors, Inc., and Teledyne Continental Motors) C-125-1, C-125-2, C145-2, C145-2H, IO-360-C, IO-360-D, IO-360-DB, IO-360-H, IO-360-HB, IO-360-K, IO-360-KB, IO-470-E, IO-470-S, IO-550-B, IO-550-G, O-300-B, O-300-C, O-300-D, O-300-E, O-470-A, O-470-B, O-470-G, O-470-J, O-470-K, O-470-L, O-470-M, O-470-N, O-470-R, O-470-S, O-470-U, O-470-11, O-470-15, TSIO-360-E, TSIO-360-EB, TSIO-360-F, TSIO-360-FB, TSIO-360-GB, TSIO-360-LB, TSIO-360-MB, TSIO-360-SB, TSIO-520-C, TSIO-520-CE, TSIO-520-E, and TSIO-520-UB model reciprocating engines; and

certain Continental Motors (Type Certificate previously held by Teledyne Continental Motors) IO-520-A, IO-520-B, IO-520-BA, IO-520-BB, IO-520-C, IO-520-D, IO-520-J, and IO-520-L model reciprocating engines. AD 2022-04-04 was prompted by reports of two accidents that were the result of power loss due to oil starvation. AD 2022-04-04 requires replacing the fiber gasket with a copper gasket. The agency issued AD 2022-04-04 to prevent loss of engine power.

#### **Actions Since AD 2022-04-04 Was Issued**

Since the FAA issued AD 2022-04-04, the FAA determined that the reciprocating engines identified in the applicability of AD 2022-04-04 are incorrect. Certain model reciprocating engines were inadvertently included in the applicability paragraph of AD 2022-04-04; and certain other model reciprocating engines were inadvertently omitted in the applicability paragraph of AD 2022-04-04. Further, after the FAA issued AD 2022-04-04, the FAA approved an additional part-numbered stainless steel PTFE gasket, in addition to the copper gasket, which was previously approved as a replacement part. The FAA, therefore, is proposing to supersede AD 2022-04-04 to revise the applicability by adding and removing certain model reciprocating engines, to update the required actions by adding stainless steel PTFE gasket, part number ST07, as a replacement part, and to revise the special flight permit paragraph by expanding the limitations.

#### **FAA's Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

#### **Related Service Information under 1 CFR Part 51**

The FAA reviewed Stratus Tool Technologies Mandatory Service Bulletin SB-001 Rev B, dated June 17, 2021. This service information specifies procedures for removing a fiber gasket and replacing it with a copper gasket. The Director of the Federal Register previously approved the incorporation by reference of this service information as of March 29, 2022 (87 FR 9435, February 22, 2022). This service information is

reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

### **Proposed AD Requirements in this NPRM**

This proposed AD would retain certain requirements of AD 2022-04-04. This proposed AD would require replacing the fiber gasket with the copper gasket or the stainless steel PTFE gasket. This proposed AD would also revise the applicability to add and remove certain reciprocating engine models, update the required actions to add an additional part-numbered stainless steel PTFE gasket as a replacement part, and revise the special flight permit paragraph to expand the limitations.

### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 6,300 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per Product</b>	<b>Cost on U.S. Operators</b>
Replace fiber gasket with copper gasket or stainless steel PTFE gasket	2.5 work-hours x \$85 per hour = \$212.50	\$34	\$246.50	\$1,552,950

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive 2022-04-04, Amendment 39-21945 (87 FR 9435, February 22, 2022); and
- b. Adding the following new airworthiness directive:

**Continental Aerospace Technologies, Inc.:** Docket No. FAA-2022-1159; Project Identifier AD-2022-00692-E.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2022-04-04, Amendment 39-21945 (87 FR 9435, February 22, 2022).

**(c) Applicability**

This AD applies to Continental Aerospace Technologies, Inc. C-125-1, C-125-2, C145-2, C145-2H, GO-300-A, GO-300-B, GO-300-C, GO-300-D, GO-300-E, GO-300-F, IO-360-C, IO-360-D, IO-360-DB, IO-360-H, IO-360-HB, IO-360-K, IO-360-KB, IO-470-C, IO-470-D, IO-470-H, IO-470-J, IO-470-K, IO-470-L, IO-470-M, IO-470-N, IO-470-S, IO-470-U, IO-470-V, IO-520-A, IO-520-D, IO-520-F, IO-520-J, IO-520-K, IO-520-L, IO-550-D, IO-550-E, IO-550-F, O-300-A, O-300-B, O-300-C, O-300-D, O-300-E, O-470-A, O-470-B, O-470-G, O-470-J, O-470-K, O-470-L, O-470-M, O-470-N, O-470-R, O-470-S, O-470-U, O-470-11, O-470-15, TSIO-360-E, TSIO-360-EB, TSIO-360-F, TSIO-360-FB, TSIO-360-GB, TSIO-360-LB, TSIO-360-MB, TSIO-360-SB, TSIO-470-C, TSIO-520-C, TSIO-520-G, and TSIO-520-H model reciprocating engines equipped with an F&M Enterprises, Inc. (F&M), or Stratus Tool Technologies, LLC (Stratus) oil filter adapter installed per Supplemental Type Certificate SE8409SW, SE09356SC, or SE10348SC.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 8550, Reciprocating Engine Oil System.

**(e) Unsafe Condition**

This AD was prompted by reports of two accidents that were the result of power loss due to oil starvation. The FAA is issuing this AD to prevent loss of engine power. The unsafe condition, if not addressed, could result in failure of the engine, in-flight shutdown, and loss of control of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Before accumulating 50 flight hours after the effective date of this AD or at the next scheduled oil change after the effective date of this AD, whichever occurs first, remove any F&M or Stratus oil filter adapter fiber gasket from service and replace it with an oil filter adapter copper gasket, part number (P/N) AN900-28, P/N AN900-29, or a stainless steel polytetrafluoroethylene gasket, P/N ST07, as applicable, in accordance with the Compliance Instructions, paragraph 6., pages 7 through 10 (including all detailed instructions for Figure 5 through Figure 16), of Stratus Tool Technologies Mandatory Service Bulletin SB-001 Rev B, dated June 17, 2021.

**(h) Installation Prohibition**

After the effective date of this AD, do not install an F&M or Stratus oil filter adapter fiber gasket onto any affected engine.

**(i) Special Flight Permit**

A special flight permit may be issued in accordance with 14 CFR 21.197 and 21.199 to permit a one-time non-revenue ferry flight to operate the airplane to the nearest location where the maintenance action can be performed provided that the engine oil pressure and engine oil temperatures are in their allowable ranges and there is no noticeable increase in engine noise. This flight must be performed with no passengers on board.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Atlanta ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD.



(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) AMOCs approved for AD 2022-04-04 (87 FR 9435, February 22, 2022) are approved as AMOCs for the corresponding provisions of this AD.

**(k) Related Information**

For more information about this AD, contact George Hanlin, Aviation Safety Engineer, Atlanta ACO, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5584; email: 9-ASO-ATLACO-ADs@faa.gov.

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on March 29, 2022 (87 FR 9435, February 22, 2022).

(i) Stratus Tool Technologies Mandatory Service Bulletin SB-001 Rev B, dated June 17, 2021.

(ii) [Reserved]

(4) For Stratus Tool Technologies, LLC, 2208 Air Park Drive, Burlington, NC 27215; phone: (800) 822-3200; website: tempestplus.com.

(5) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on September 7, 2022.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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